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EXAMINER

LIVERSEDGE, JENNIFER L

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3628

DATE MAILED: 10/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/843,124	Applicant(s) TANG, CEDRIC	
	Examiner Jennifer Liversedge	Art Unit 3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: designation of global pricing manger in the first paragraph of page 8 should be (7) not (3) in two places.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 9 recites the limitation "said analytics tool manager" in claim 9, second line. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract that do not apply, involve, use, or advance the technological arts fail to promote the “progress of science and the useful arts” and therefore are found to be non-statutory subject matter.

In the present case, claims 1 – 15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The applicant claims “a plurality of traders” in claim 1 and people are not patentable.

In the present case, claims 16 – 26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims as set forth in claims 16 – 26 do not apply, involve, use, or advance the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-3, 6, 11-12, 16-18, 20 and 22-23 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Number 6,876,981 to Berckmans (further referred to as Berckmans).

6. Regarding claim 1, Berckmans discloses a system for providing real-time (column 2, line 66 - column 3, line 1; column 4, lines 38 – 43 and lines 57 – 58) financial information (column 2, lines 62 – 67; column 3, lines 8 – 17) for OTC securities (column 3, line 64 – column 4, line 1; column 4, lines 47 – 50) comprising a plurality of traders generating pricing information for said OTC securities (column 3, lines 60 – 63); a plurality of regional pricing databases, each of said plurality of regional pricing databases receiving said pricing information from said plurality of traders (column 4, lines 18 – 20); and an analytics tool engine being in communication with said plurality of regional pricing databases for receiving said pricing information (column 4, lines 5 – 9), said analytics tool engine generating a plurality of analytic views based on said pricing information (column 3, lines 8 – 17; column 6, lines 15 – 22); wherein when at least one of said plurality of traders generates new pricing information updating said pricing information for at least one of said OTC securities, said analytics tool engine automatically updates at least one of said plurality of analytic views based on said new pricing information (column 3, lines 8 – 17, column 4, line 57 – column 5, line 3).

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7. Regarding claim 2, Berckmans discloses the system wherein said pricing information is received by said analytics tool engine in real time (column 2, line 66 - column 3, line 1; column 4, lines 38 – 43 and lines 57 – 58).
8. Regarding claim 3, Berckmans discloses the system further comprising an historical pricing database, wherein when said new pricing information updating said pricing information for said at least one of said OTC securities is received, said pricing information for said at least one of said OTC securities is stored in said historical pricing database (column 4, lines 51 – 56).
9. Regarding claim 6, Berckmans discloses the system wherein pricing information includes volatility surfaces (column 6, lines 31 – 41).
10. Regarding claim 11, Berckmans discloses the system comprising at least one access device in communication {see claim 10 below regarding analysis tools manager}, displaying at least one of said plurality of views (column 3, lines 8 – 17, column 4, line 57 – column 5, line 3), wherein when said analytics tool engine receives said new pricing information (column 4, lines 5 – 11), said analytics tools engine automatically updates said display of said at least one of said plurality of analytic views (column 3, lines 8 – 17, column 4, line 57 – column 5, line 3).

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11. Regarding claim 12, Berckmans discloses the system wherein said plurality of analytic views includes a volatility view (column 6, lines 31 – 41).

12. Regarding claim 16, Berckmans discloses a method for providing real-time (column 2, line 66 - column 3, line 1; column 4, lines 38 – 43 and lines 57 – 58) financial information (column 2, lines 62 – 67; column 3, lines 8 – 17) for OTC securities (column 3, line 64 – column 4, line 1; column 4, lines 47 – 50) comprising the steps of receiving pricing information for said OTC securities from a plurality of traders (column 3, lines 60 – 63); generating a plurality of analytic views based on said pricing information (column 3, lines 8 – 17; column 6, lines 15 – 22); receiving from at least one of said plurality of traders new pricing information updating pricing information for at least one of said OTC securities (column 2, line 63 – column 3, line 1; column 4, lines 5 – 9 and lines 18 – 20); and automatically updating at least one of said analytic views based on said new pricing information (column 3, lines 8 – 17, column 4, line 57 – column 5, line 3).

13. Regarding claim 17, Berckmans discloses the method wherein said price update is received in real time (column 2, line 66 - column 3, line 1; column 4, lines 38 – 43 and lines 57 – 58).

14. Regarding claim 18, Berckmans discloses the method further comprising the step of storing in an historical pricing database said pricing information for said at least one of said OTC securities when said new pricing information updating said pricing

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information for said at least one of said OTC securities is received (column 4, lines 51 – 56).

15. Regarding claim 20, Berckmans discloses the method wherein pricing information includes volatility surfaces (column 6, lines 31 – 41).

16. Regarding claim 22, Berckmans discloses the method comprising at least one access device displaying at least one of said plurality of views (column 3, lines 8 – 17, column 4, line 57 – column 5, line 3), wherein the step of automatically updating includes the steps of automatically updating the display of said at least one of said plurality of analytic views (column 3, lines 8 – 17, column 4, line 57 – column 5, line 3).

17. Regarding claim 23, Berckmans discloses the method wherein said plurality of analytic views includes a volatility view (column 6, lines 31 – 41).

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

19. Claims 4, 5, 8-10, 15, 19 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berckmans.

20. Regarding claim 4, Berckmans does not specifically disclose the system wherein OTC securities include foreign exchange derivatives. However, Berckmans does disclose that "financial data generated may include information about traded entities such as stocks, bonds, options, currencies, commodities, mutual funds, and many other traded assets (column 3, line 64 – column 4, line 1) and a "day long tick-by-tick accounting of stocks, options, bonds, and other assets traded in various financial exchanges" (column 4, lines 48 – 50). It would be obvious to one of ordinary skill in the art that a foreign exchange derivative represents one of many financial instruments available for trade on financial exchanges and is therefore not patently different from the list as provided by Berckmans. The motivation would be to provide current trading information for an investment instrument, specifically a derivative, in this or a foreign, market to investors.

21. Regarding claim 5, Beckmans does not disclose the system wherein said plurality of regional databases includes three regional databases and wherein each of said three regional databases are located in a different trading time zone. However, Beckmans does disclose "financial exchanges being located around the world, and said financial exchanges transmitting their financial data as it changes, on a tick-by-tick basis" (column 4, lines 18 – 20). It would be obvious to one of ordinary skill in the art that the reference speaks to a plurality of known exchanges around the world and that the exchanges would inherently be in different time zones. It is therefore not patently different that the applicant would specify three exchanges in different time zones. The motivation would be to gather data from all stock exchanges, domestic and international, in order to make available the most recently traded information from the market to investors.

22. Regarding claim 8, Berckmans does not disclose a global pricing manager. However, Berckmans discloses wherein the function of receiving data, as performed by said global pricing manager as disclosed in the application, is performed by a computer. It is not patently different to state that an individual titled a global pricing manager receives data as opposed to a computer. Berckmans discloses a computing center receiving notification from at least one of said plurality of regional databases that one of said plurality of traders generated said new pricing information and wherein said computer center receives new pricing information from said at least one of said plurality

of regional databases (column 3, line 60 – column 4, line 9). It would be obvious to one of ordinary skill in the art that financial exchange data would be received via a computer for further processing, since computers dominated data transfer in the current business environment at the time of the invention. The motivation would be to use the tools available for optimal data transfer.

23. Regarding claim 9, Berckmans does not disclose an analytics view manager. However, Berckmans discloses wherein the function of making a relevancy decision, as performed by said analytics view manager as disclosed in the application, is performed by a computer. It is not patently different to state that an individual titled analytics view manager makes a relevancy decision regarding received data. Berckman discloses a computer receives a notification of said new pricing information and determines whether said new pricing information is relevant to at least one of said plurality of views (column 4, lines 43 – 47). It would be obvious to one of ordinary skill in the art that a computer would be used to make a relevancy decision on received data. The motivation would be to use the most efficient use of tools available for data processing.

24. Regarding claim 10, Berckmans does not disclose an analytics view manager or an analytics tool manager. Berckmans discloses a system in which a computer is used for the transfer of newly received data, after a decision has been made that the data is relevant (column 4, lines 43 – 47). It is not patently different to say that data transfer will occur through various managers instead of through a computer. It would be obvious to

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one of ordinary skill in the art that a computer would be used to transfer data. The motivation would be to use the most efficient use of tools available for data transfer.

25. Regarding claim 15, Berckmans does not disclose the system wherein a plurality of views including a Spread view, a Rich-Cheap Implied view, a Rich-Cheap Implied over Actual view, a Risk Reversal Value view, a Butterfly view or a Forecast Range view. However, Berckmans discloses the system wherein said plurality of views include a HiLo View. It would be obvious to one of ordinary skill in the art that an infinite number of graphs can be generated from a given set of data. Simply listing various forms of graphs is not patently different from existing art. The motivation of providing various forms of charts and graphs would be to supply representations of the data to market investors.

26. Regarding claim 19, Berckmans does not specifically disclose the method wherein OTC securities include foreign exchange derivatives. However, Berckmans does disclose that "financial data generated may include information about traded entities such as stocks, bonds, options, currencies, commodities, mutual funds, and many other traded assets (column 3, line 64 – column 4, line 1) and a "day long tick-by-tick accounting of stocks, options, bonds, and other assets traded in various financial exchanges" (column 4, lines 48 – 50). It would be obvious to one of ordinary skill in the art that a foreign exchange derivative represents one of many financial instruments available for trade on financial exchanges and is therefore not patently different from the

list as provided by Berckmans. The motivation would be to provide current trading information for an investment instrument, specifically a derivative, in this or a foreign, market to investors.

27. Regarding claim 26, Berckmans does not disclose the method wherein a plurality of views including a Spread view, a Rich-Cheap Implied view, a Rich-Cheap Implied over Actual view, a Risk Reversal Value view, a Butterfly view or a Forecast Range view. However, Berckmans discloses the system wherein said plurality of views include a HiLo View. It would be obvious to one of ordinary skill in the art that an infinite number of graphs can be generated from a given set of data. Simply listing various forms of graphs is not patently different from existing art. The motivation of providing various forms of charts and graphs would be to supply representations of the data to market investors.

28. Claims 7, 13-14, 21 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berckmans, and further in view of "Capturing the volatility smile of options on high-tech stocks – a combined GARCH-neural network approach" by Gunter Meissner and Noriko Kawano in Derivatives Use, Trading & Regulation (further referred to as Meissner).

29. Regarding claim 7, Berckmans does not disclose the system wherein said pricing information includes spot prices. However, Meissner discloses pricing information

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including spot prices (page 1, lines 44 – 46). It would be obvious to one of ordinary skill in the art to combine the use of spot pricing as disclosed by Meissner with the information regarding a particular stock being gathered and stored in cells for processing and graphical representation as disclosed by Berckmans. The motivation would be to have the best available information available for processing to provide to market investors.

30. Regarding claim 13, Berckmans does not disclose the system wherein a plurality of analytic views includes a smile view. However, Meissner discloses a smile view (page 2, line 3 and lines 10 – 11). It would be obvious to one of ordinary skill in the art to use the smile view as disclosed by Meissner with the graphical data display as disclosed by Berckmans. The motivation would be to provide one of well known and further infinite number of graphical representations of financial data to market investors.

31. Regarding claim 14, Berckmans does not disclose the system wherein a plurality of analytic views includes a GARCH view. However, Meissner discloses a GARCH view (page 1, lines 44 – 46 and page 3, lines 9 - 12). It would be obvious to one of ordinary skill in the art to use the GARCH view as disclosed by Meissner with the graphical data display as disclosed by Berckmans. The motivation would be to provide one of well known and further infinite number of graphical representations of financial data to market investors.

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32. Regarding claim 21, Berckmans does not disclose the method wherein said pricing information includes spot prices. However, Meissner discloses pricing information including spot prices (page 1, lines 44 – 46). It would be obvious to one of ordinary skill in the art to combine the use of spot pricing as disclosed by Meissner with the information regarding a particular stock being gathered and stored in cells for processing and graphical representation as disclosed by Berckmans. The motivation would be to have the best available information available for processing to provide to market investors.

33. Regarding claim 24, Berckmans does not disclose the method wherein a plurality of analytic views includes a smile view. However, Meissner discloses a smile view (page 2, line 3 and lines 10 – 11). It would be obvious to one of ordinary skill in the art to use the smile view as disclosed by Meissner with the graphical data display as disclosed by Berckmans. The motivation would be to provide one of well known and further infinite number of graphical representations of financial data to market investors.

34. Regarding claim 25, Berckmans does not disclose the method wherein a plurality of analytic views includes a GARCH view. However, Meissner discloses a GARCH view (page 1, lines 44 – 46 and page 3, lines 9 - 12). It would be obvious to one of ordinary skill in the art to use the GARCH view as disclosed by Meissner with the graphical data display as disclosed by Berckmans. The motivation would be to provide

one of well known and further infinite number of graphical representations of financial data to market investors.

Conclusion

35. Any inquiry concerning this communication should be directed to Jennifer Liversedge whose telephone number is 571-272-3167. The examiner can normally be reached on Monday – Friday, 8:30 – 5 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam Sough can be reached at 571-272-6799. The fax number for the organization where the application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Liversedge

Examiner

Art Unit 3628


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